

Notice of Allowability

Application No.

10/600,460

Examiner

Lulit Semunegus

Applicant(s)

SHENG, CHIH-SHENG

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to _____.
2. ☒ The allowed claim(s) is/are 1-11.
3. ☒ The drawings filed on 23 June 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Morton Rosenberg on 12/7/04.

The application has been amended as follows:

Claim 1 to be changed:

On page 14,

Line 9, "the upper barrel" to "an upper barrel"

Line 18, "the upper and lower barrels" to "the upper barrel and a lower barrel";

And on page 15,

Line 4, "a flow-guiding movable body" to "a flow-guiding piston".

Claim 2, to be changed:

On page 15,

line 25, "an upper" to "the upper";

and on page 16,

line 1, "a lower barrel and both of which" to "lower barrel, both of which".

Allowable Subject Matter

2. Claims 1-11 are allowed.

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3. The following is an examiner's statement of reasons for allowance: Upon review of the application filed on 6/23/2003 and the prior art of record no paintgun with pneumatic feeding and discharging process exists comprising: a trigger; a barrel; a pneumatic deliver mechanism installed within the barrel assembly including;

- i) a flow-guiding body positioned within the upper barrel, the front part of the flow-guiding body being constructed as a tube having a through hole inclinedly extended at the top wall, the flow-guiding body having an axially extending hole with a smaller diameter at the front part and a larger diameter at the rear part while a tail stopper is plugged into the rear part of the flow-guiding body, thereby forming a major air channel at the front part and a flow-guiding chamber at the rear part thereof, the flow-guiding chamber having an input port which is in connection with upper and lower inlets of the upper and lower barrels, the tail stopper having an outlet port extending from axial direction to radial direction at the inner end thereof, the outlet port communicating with an outlet channel in the larger part of the flow-guiding body while the outlet channel is further connected to an upper and a lower outlet of the upper and the lower barrels, a stopper being provided to control the opening and closing of the air flow channel, a connection channel being disposed beside the lower outlet and connected to a minor air channel at the outer side of the bottom of the tube, the movement of the stopper being controlled by the trigger assembly;
- ii) a flow-guiding movable body disposed within the flow-guiding chamber with a slimmer front part and a wider rear part an air piston at the front end of the flow-

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guiding piston being forced against the major air channel while a separating body at the rear end of the flow-guiding piston is inserted into the internal wall of the flow-guiding chamber such that the flow-guiding chamber is divided by the separating body into a front and a rear air pressure chamber with different pressure area, a small through hole being interposed between the front and the rear air pressure chambers; and

iii) a delivery tube placed around the tube at the front end of the flow-guiding body, a return spring being disposed around the front part of the delivery tube; whereby the stopper is used to control the opening or closing of air flow channel, thereby leading to a pressure difference between the front and rear air pressure chambers of the flow-guiding piston, and the delivery tube is shifted forward by means that a small amount of air flow is fed into the minor air channel so as to push a paintball a little forward; thereafter, the paintball is discharged by means of thrust of air flow into the major air channel.

This statement is not intended to necessarily state all the reasons for allowance or all the details why the claims are allowed and has not been written to specifically or impliedly state that all the reasons for allowance are set forth (MPEP 1302.14).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shih (6,439,217) teaches a paintball gun with pneumatic feeding and discharging process comprising: a trigger assembly; a barrel assembly; and pneumatic deliver mechanism including: a flow guiding body (62) positioned within the upper barrel (fig. 1), the front part of the flow-guiding body being constructed as a tube having a through hole (61).

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lulit Semunegus whose telephone number is (703) 306-5960. The examiner can normally be reached on Mon-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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12/5/04

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Art Unit 3641

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MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER